Claims

What is Claimed is:

1   1.   A method for automatedly administering an audiometric test,

2   comprising the steps of:

3   controlling an audiometer to selectively switch the audiometer

4   output between test tones generated by the audiometer and sound

5   signals generated from digital information;

6   first switching the audiometer output to sound signals when the

7   step of controlling indicates a particular condition;

8   outputting sound representative of the sound signals after the

9   step of first switching;

10   second switching the audiometer output to test tones after the

11   step of outputting; and

12   outputting test tones until the next step of first switching.

     2.   The method of claim 1, wherein the particular condition is
selected from the group consisting of a beginning of a new test, a completion
of a current test, and a test error.

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3.   A multimedia audiometer, comprising:

means for outputting sound signals generated from digital information;

means for outputting test tones;

means for switching between the means for outputting sound signals and the means for outputting test tones, the means for switching being communicatingly connected with the means for outputting sound signals and the means for outputting test tone; and

means for controlling the means for switching, the means for controlling being communicatingly connected with the means for switching.

4.   A multimedia audiometer, comprising:

a computer;   multimedia computer

a tone generator;

a switch connected with the computer and the tone generator;

wherein the switch selectively causes either the tone generator or the computer to output sound waves and the computer controls the switch.

1   5.   An audiometer, comprising:

2   a processor;

3   a memory, communicatingly connected with the processor, for

4   storing digital data;

5   a sound wave generator, for generating analog sound signals in

6   respect of digital data, electrically connected with the processor;

7   a test tone generator electrically connected with the processor;

8   a switch connected with the sound wave generator, the test tone

9   generator, and the processor;

10   wherein the switch is controlled by the processor to selectively

11 cause either the sound wave generator or the test tone generator to

12 output sound waves.

    6.   The audiometer of claim 5, further comprising earphone speakers
communicatingly connected to the sound wave generator and the test tone
generator.

    7.   The audiometer of claim 5, further comprising a handswitch for
inputting a response detectably by the processor.

1   8.   The audiometer of claim 6, further comprising a handswitch for

2   inputting a response detectable by the processor, wherein the processor

3   operates based on the response.

1   9.   The audiometer of claim 8, wherein the switch is also connected

2   with the earphone speakers, between the sound wave generator and the test

3   tone generator, on the one hand, and the earphone speakers, on the other

4   hand.

10.   The audiometer of claim 5, further comprising a talkover card including an amplifier, the talkover card electrically connecting the sound wave generator and the switch.

11.   An instrument, the instrument conducts a test protocol on a test subject, the test protocol comprises an output by the instrument followed by an input to the instrument, the test subject determines the input, the input may be positive, negative, or null, comprising:

an output generator;

an input detector for detecting the input;

a digital data storage for storing a digital data;

a multimedia converter, the multimedia converter converts the digital data to an analog signal; and

logic circuitry connected to the input detector, the digital data storage, the multimedia converter, and the output generator, for logically operating on the input, reading the digital data, delivering the digital data to the multimedia converter, and controlling the output generator.

12.   The instrument of claim 11, wherein the output generator comprises:

an analog test tone generator; and

a sound wave generator for producing sound waves representative of the analog signal.

13.   The instrument of claim 12, wherein the output generator further comprises a switch for switching the output generator between the analog test tone generator and the sound wave generator.

14. A multimedia audiometer, comprising:

a basic audiometer;

a multimedia computer;

a multimedia input interface communicatingly connecting the computer and the basic audiometer; and

and a communications interface communicatingly connecting the computer and the basic audiometer.

15. The multimedia audiometer of claim 14, further comprising:

an input device connected to the basic audiometer; and

an output speaker connectected to the basic audiometer.

16. The multimedia audiometer of claim 14, wherein the computer comprises a sound wave generator for converting a digital information to analog signals in respect of the digital information.

17. The multimedia audiometer of claim 14, further comprising a switch connected to the multimedia input interface and the basic audiometer, on the one hand, and the output speaker, on the other hand, for switching between a first signal communicated over the multimedia input interface and a second signal generated by the basic audiometer as an output for the output speaker.

18. The multimedia audiometer of claim 14, wherein the computer and the basic audiometer communicate over the communications interface and the computer controls the operation of the audiometer over the communications interface.

- 29 -

1   19.   The multimedia audiometer of claim 17, wherein the computer

2 and the basic audiometer communicate over the communications interface and

3 the computer controls the operation of the audiometer over the communications

4 interface and wherein the switch comprises a relay and the computer controls .

5 the relay in order to switch between the first signal communicated over the

6 multimedia input interface and the second signal generated by the basic

7 audiometer as the output for the output speaker.

1   20.   The multimedia audiometer of claim 19, wherein the computer

2 comprises a sound wave generator for converting a digital information stored

3 by the computer to analog signals in respect of the digital information.
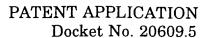
1   21.   A diagnostic instrument, comprising:

2   means for outputting an audible sound;

3   means for generating a test tone;

4   means for storing a digital data;

5   means for generating an analog signal derived from the digital

6   data;

7   means for switching an output of the means for outputting

8   between the test tone and the analog signal, the means for switching

9   being electrically connected to the means for generating a test tone and

10   the means for generating an analog signal;

11   means for processing;

12   means for inputting, the means for inputting connects the means

13   for processing to the means for outputting; and

14   means for communicating, the means for communicating connects

15   the means for processing to the means for outputting, the means for

16   generating the test tone, the means for storing the digital data, the

17   means for generating the analog signal, the means for switching, and

18   the means for inputting.

1   22.   A method of performing a diagnostic test protocol, comprising the

2   steps of:

3   outputting an audible sound;

4   generating a test tone;

5   storing a digital data;

6   generating an analog sound derived from the digital data;

7   switching the audible sound from the step of outputting between

8   the test tone and the analog signal;

9   processing the digital data; and

10   controlling the steps of outputting, generating the test tone,

11   storing, generating the analog sound, and switching.